

Attachment 3.15b

Lewinsville Road over I-495

Bridge and Approach Sidewalk Modifications

LEWINSVILLE ROAD OVER I-495

BRIDGE AND APPROACH SIDEWALK MODIFICATIONS

1. Existing Bridge Structure

The existing bridge configuration includes two 5-foot wide sidewalks (plus 6" shy distance from barrier), two 5-foot wide bike lane/shoulder lanes, and two 12-foot wide traffic lanes (as shown Figure 1, looking to the east). There are multiple utilities in three of the four bays between girders, and there are two lines of conduit in each sidewalk.

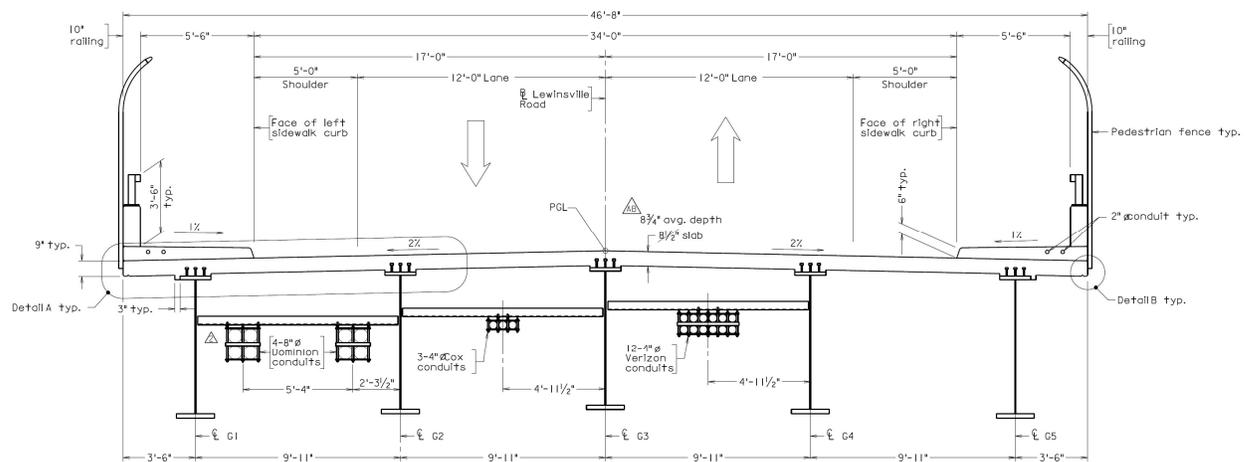


Figure 1. Existing Lewinsville Road bridge typical section

2. Proposed Bridge Structure

The existing 5'-6" sidewalks shall be widened to 10'-0" on both sides of the bridge to accommodate pedestrian and bicycle traffic in both directions. This shall be accomplished by reconstructing the sidewalk to maintain the minimum thickness at the edge of the sidewalk within reasonable limits. The proposed sidewalks shall have 0.5% slopes and shall provide minimum 5" curbs. A 1'-6" wide space for a shoulder shall be provided to accommodate the gutter, and the remaining width for two-way traffic lanes shall be 22 feet total comprised of two (2) 11-foot-wide lanes (see Figure 2). The existing parapets and railings shall remain. Any damage that occurs due to the performance of the proposed Work shall be repaired at the Design-Builder's cost. See Table 1 for estimated quantities to implement the proposed modifications to the bridge.

Execution Version

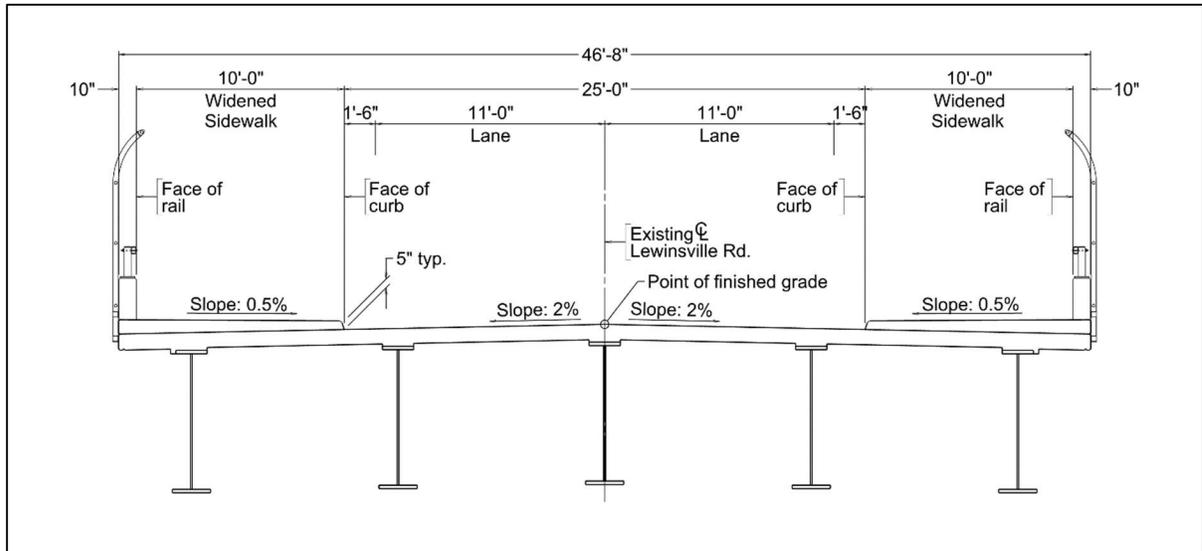


Figure 2. Proposed Lewinsville Road bridge typical section

Table 1. Estimated Proposed Bridge Quantities

| Item Description | Specification | Units | Estimated Quantity |
|--|---------------------|-------|--------------------|
| Concrete Class A4 Mod. Low Shrinkage | 404 | CY | 202.1 |
| Corrosion Resistant Reinforcing Steel, Class II | 406 | LB | 7580 |
| Remove Portion of Existing Structure (Str. No. 2275) | 413 See Note (1) | LS | 1 |
| Replace Existing Conduits & Junction Boxes in Sidewalk | See Note (2) | LS | 1 |
| Elastomeric Expansion Dam (2+''-3'') | 421 See Note (3) | LF | 94 |

(1) **Remove Portion of Existing Structure (Str. No. 2275)** shall be in accordance with Section 413 of the Road and Bridge Specifications and shall include removal of the existing sidewalks on the Lewinsville Road bridge and approach slabs from face of rails to face of curbs and eradication of the existing white edge line pavement markings on the bridge. Sidewalk removal methods shall not reduce the existing bridge deck thickness. Eradication of edge line pavement markings on the bridge shall be in accordance with Section 512.03(l) of the Road and Bridge Specifications using very light grinding limited to the area of the marking. After installation of the proposed sidewalk concrete, any eradication areas that remain visible shall be treated with a clear sealant from the VDOT Approved Products List 30.

(2) **Replace Existing Conduits & Junction Boxes in Sidewalk** shall include replacing in-kind all conduits and junction boxes in the existing sidewalk on bridge and approach slabs. Expansion fittings shall be included to accommodate thermal movement as necessary between the ends of bridge and approach slabs.

- (3) **Elastomeric Expansion Dam (2+”-3”)** shall be provided in accordance with Section 421 to accommodate the widened sidewalk geometry. Estimated quantity is provided to include replacement of existing expansion dam and sliding plates in sidewalk areas and resealing of the existing expansion dam in roadway, which can remain in place.

3. Proposed Bridge Approaches

The existing sidewalks on the bridge approaches shall be widened to 10’-0” width. The proposed widened sidewalks shall extend to the nearest adjacent roadway intersection in each quadrant. See Figures 3 and 4 for approximate limits of the proposed bridge approach improvements. To accommodate the sidewalk widening, nine (9) existing drain inlet structures shall be modified to accept flow from the roadway. Inlet modifications are indicated in Figures 3 and 4. The following potential utility conflicts shall be addressed: 1) An existing sanitary sewer manhole in the southwest quadrant is anticipated to be impacted by the newly widened sidewalk, and 2) An in-ground junction box located at the intersection of Lewinsville Road and Snow Meadow Lane that may be impacted.

Lane widths shall be a minimum of 11’ width within the project area shown in Figures 3 and 4 and shall transition to the existing 12’ width at the project limits. Throughout the impacted areas of the asphalt roadway shall be milled and overlaid with new asphalt pavement. Existing pavement markings shall be removed, and new pavement markings shall be installed on bridge and both approaches. Existing bike lanes within the project limits shall be removed to accommodate the two 10’ sidewalks.

Rectangular Rapid Flashing Beacons (RRFB) and a crosswalk shall be installed west of the intersection of Lewinsville Road and Timberly Lane as shown on the RFP Conceptual Plans. The proposed shared use path along I-495 shall be designed to terminate at Lewinsville Road as shown in the RFP Conceptual Plans. The proposed widened sidewalk shall be designed to tie-in to the proposed shared use path terminus.

See Figures 3 and 4 for approximate location of shared use path, stormwater management, and sidewalk widenings.

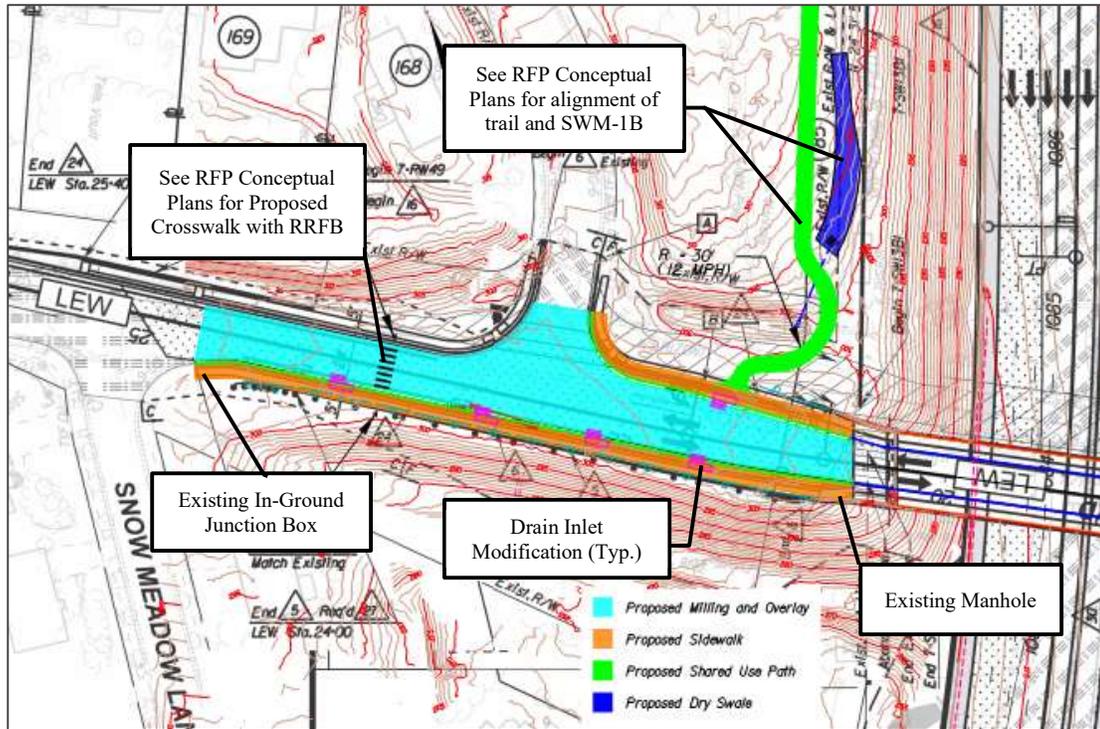


Figure 3. Lewinsville Road West of I-495

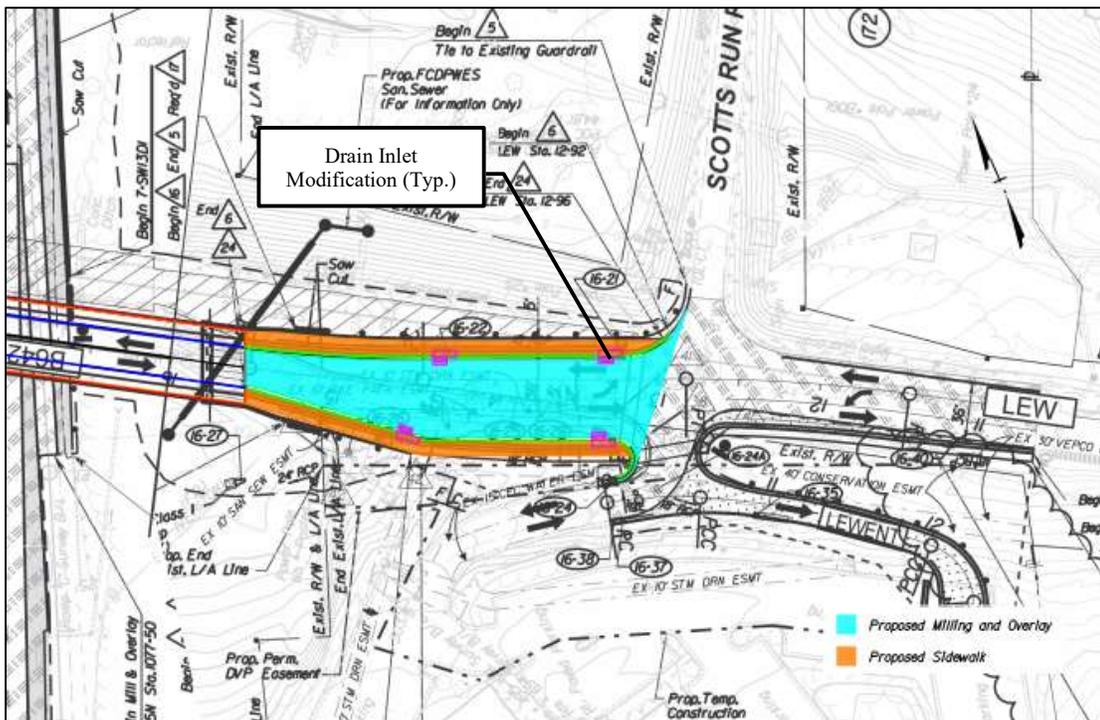


Figure 4. Lewinsville Road East of I-495